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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER KARDOS, NEIL R				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

Office Action Summary

Application No.

10/628,565

Applicant(s)

SCHULZ ET AL.

Examiner

Neil R. Kardos

Art Unit

3623

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 5-14, 16, 17, 20-29, 31 and 33-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 5-14, 16, 17, 20-29, 31 and 33-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 1/22/09
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This is a **FINAL** Office Action on the merits in response to communications filed on February 9, 2009. Claims 3, 4, 15, 18, 19, 30, and 32 have been cancelled. Claims 38-44 have been added. Currently, claims 1, 2, 5-14, 16, 17, 20-29, 31, and 33-44 are pending and have been examined.

Response to Arguments

Applicant's arguments filed on February 9, 2009 have been fully considered but they are not persuasive. Applicant argues the following:

- (A) Schulz fails to describe a three-tier process model, in which workflows (first tier) are abstracted and are provided as respective workflow views (second tier), which are in turn used to provide a plurality of collaborative workflows (third tier). (See Remarks, page 13).
- (B) Schulz fails to disclose a third workflow view that is based on the second workflow and that includes a third virtual task as an abstraction of the second plurality of actual tasks, the third virtual task being different than the second virtual task. (See Remarks, pages 13-14).
- (C) Schulz does not disclose an enterprise that renders a service that is common to multiple collaborative workflows. (See Remarks, page 14).

Applicant's arguments will now be addressed in turn:

- (A) Schulz fails to describe a three-tier process model, in which workflows (first tier) are abstracted and are provided as respective workflow views (second tier), which are in turn used to provide a plurality of collaborative workflows (third tier).**

Regarding argument (A), Examiner respectfully disagrees. Schulz discloses workflows (the gray circles within clouds in figure 1) that are abstracted and provided as respective workflow views (the solid black symbols of figure 1), which are in turn used to provide collaborative workflows (the black symbols within gray circles in figure 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to extend this concept to create several (the claimed "plurality of") collaborative workflows. In fact, Schulz suggests as much (see section 4.6, disclosing searching for a suitable company, suggesting that companies make their services available to more than one collaborative workflow). Thus, Schulz teaches this limitation.

- (B) Schulz fails to disclose a third workflow view that is based on the second workflow and that includes a third virtual task as an abstraction of the second plurality of actual tasks, the third virtual task being different than the second virtual task.**

Regarding argument (B), Examiner respectfully disagrees. In section 4.2, Schulz discloses that a private workflow (the gray circles within clouds in figure 1) can offer its functionality to another private or public business process. Thus, the second (private) and third (public) different abstractions (or virtual tasks) are based on the same plurality of actual tasks.

Furthermore, Examiner notes that this limitation has been added to the claims and new art has been applied below; this limitation is taught by Kafeza, the newly-added reference, as explained in the rejection below.

(C) Schulz does not disclose an enterprise that renders a service that is common to multiple collaborative workflows.

Regarding argument (C), Examiner respectfully disagrees. In section 4.2, Schulz discloses that a "private activity (the grey circles without contained symbols) can offer its functionality to another private or public business process." Thus, Schulz discloses that a service can be common to multiple workflows. Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to extend the teachings of Schulz to allow more than one collaborative workflow. One of ordinary skill in the art would have been motivated to do so for the benefit of efficiency (i.e. economies of scale).

Response to Amendment

Applicant's amendments to claims 1 and 31 are sufficient to overcome the § 101 rejection set forth in the previous Office Action. Accordingly, the § 101 rejection with respect to these claims and their dependent claims has been withdrawn.

Applicant's amendments to claim 16 are NOT sufficient to overcome the § 101 rejection set forth in the previous Office Action for the reasons set forth below. The § 101 rejection with respect to claim 16 and its dependent claims has been maintained below.

Claim Objections

Claims 31, 33-37, and 44 are objected to because of the following informalities:

Claim 31: Claim 31 recites a "system" comprising "a computer-readable storage medium encoded with a computer program comprising instructions that, when executed, operate to cause a computer to perform operations...." It is not clear how a computer-readable medium constitutes a system. Furthermore, it is not clear what differentiates claim 31 and its dependents from claim 1 and its dependents. Clarification of this matter is required.

Claims 33-37, and 44: The dependent claims are rejected for failing to remedy the deficiencies of the claims from which they depend.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 16, 17, 20-29, and 41-43 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 16: Claim 16 is directed toward the statutory category of a process. In order for a claimed process to be patentable subject matter under 35 U.S.C. § 101, it must either: (1) be tied to a particular machine, or (2) transform a particular article to a different state or thing. *See in re Bilski*, 545 F.3d 943, 956 (Fed. Cir. 2008); *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972). If neither of these requirements is met by the claim, the method/process is not patentable subject matter

under § 101. Thus, to qualify as a statutory process under § 101, the claim should positively recite the machine to which it is tied (e.g. by identifying the apparatus that accomplishes the method steps), or positively recite the subject matter that is being transformed (e.g. by identifying the material that is being changed to a different state). Nominal recitations of structure in an otherwise ineligible method fail to make the method a statutory process. *See Bilski*, 545 F.3d at 957; *Benson*, 409 U.S. at 71-72. Thus, incidental physical limitations such as insignificant extra-solution activity and field of use limitations are not sufficient to convert an otherwise ineligible process into a statutory one.

Here, the claimed process fails to meet the above requirements for patentability under § 101 because it is not tied to a particular machine and does not transform an article to a different state. The only possible tie to a particular machine would be in the following limitations: "storing a first workflow and a second workflow in a computer-readable storage medium" and "accessing the first and second workflows from the computer-readable storage medium." However, a computer-readable storage medium is not a particular machine, and accessing data from a computer-readable storage medium does not require the use of a particular machine. In the present claims, a sheet of paper could be the claimed "computer-readable storage medium" because it could be scanned into the computer, and thus "accessed."

Claims 17, 20-29, and 41-43: The dependent claims are rejected for failing to remedy the deficiencies of the claims from which they depend.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 5-14, 16, 17, 20-29, 31, and 33-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schulz, "Architecting Cross-Organizational B2B Interactions" in view of Basu, "A Formal Approach to Workflow Analysis" and further in view of Kafeza, "View-Based Contracts in an E-Service Cross-Organizational Workflow Environment."

Claim 1: Schulz teaches a computer-readable medium encoded with a computer program comprising instructions that, when executed, operate to cause a computer to perform operations comprising:

- providing a first workflow associated with only a first party, the first workflow including a first plurality of tasks (see page 95: sections 4.1 and 4.2, disclosing separating workflows into shared/public tiers and private tiers; page 96: figure 1; page 97: figure 2);
- generating a first workflow view representing an abstracted first workflow different from and based on the first workflow, the first workflow view including a first virtual task as an abstraction of the first plurality of actual tasks (see pages 95-96: section 4.2.2, disclosing business process services, which are an abstraction of the actual processes offered by an organization; page 96: figure 1; page 95: section 4.2)

- providing a second workflow associated with only a second party, the second workflow including a second plurality of actual tasks (see page 95; sections 4.1 and 4.2; figures 1-2);
- generating a second workflow view representing an abstracted second workflow different from and based on the second workflow, the second workflow view including a second virtual task as an abstraction of the second plurality of actual tasks (see pages 95-96: section 4.2.2; figure 1; page 95: section 4.2);
- generating a first coalition workflow view referencing the first workflow view and the second workflow view to provide a first collaborative workflow, the first collaborative workflow specifying tasks that the first party and the second party are required to perform (see figures 1-2).

Schulz does not explicitly disclose the first and second workflow views expressing first and second virtual tasks as first and second vertices within a first and second workflow view matrix. Basu discloses expressing tasks of workflows as vertices within a matrix (see tables on pages 23-24, 29, and 31). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the matrices of Basu to express the tasks of Schulz. One of ordinary skill in the art would have been motivated to do so for the benefit of efficiencies gained by being able to easily determine the relation between tasks.

Schulz also does not explicitly disclose generating a third workflow view based on the second workflow view and including a third virtual task as an abstraction of the second plurality of actual tasks, the third virtual task being different than the second virtual task; and generating a second coalition workflow view referencing the third workflow view to provide a second

collaborative workflow view, the second collaborative workflow specifying tasks that the second party is required to perform (Shultz does, however, suggest these limitations: see abstract, disclosing exposing interaction points that can selectively expose information about an organization's processes, tasks, and roles). However, Schulz does disclose tasks that a party is required to perform (see page 95: section 4.2.1). Kafeza makes up for the deficiencies of Schulz (see pages 75-76: section 2, disclosing a mechanism to allow authorized external parties to access and make use of only the related and relevant parts of a workflow, while maintaining the privacy of other unnecessary/unauthorized information; also disclosing that workflow views are useful for security purposes, such as restricting access; see also figure 1). Kafeza discloses that different parties should have different access to the same private workflow view. Schulz discloses generating coalition workflow views based on these private workflow views. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the different views taught by Kafeza into the coalition workflows of Schulz. One of ordinary skill in the art would have been motivated to do so for the benefit of increased flexibility and security (e.g. allowing different levels of access).

Claim 2: Schulz discloses wherein the first workflow and the second workflow are private to the first and second parties, respectively (see pages 95-96: sections 4.2-4.2.2).

Claim 5: Schulz discloses a dependencies between virtual task and the plurality of actual tasks, wherein the dependencies are selected to maintain an order of operation of the actual tasks

(see page 95: section 4.1 and 4.2.1, disclosing a shared business process to maintain dependencies between elements of business processes from different organizations).

Claims 6-7: Schulz discloses wherein virtual executions correspond to actual executions and actual transitions are reflected in virtual transitions (see pages 97-98, disclosing a B2B process in action, including customer actions triggering business processes; figure 2).

Claim 8: Schulz discloses wherein a message from a party concerning a virtual task is forwarded to an active task (see page 96: section 4.3, disclosing business events that exchange information between private tasks and shared tasks).

Claim 9: Schulz discloses virtual tasks in workflow views, wherein the virtual tasks correspond to a plurality of actual tasks (see page 95: section 4.1, disclosing compound tasks that represent several tasks that are grouped together).

Claim 10: Schulz discloses wherein the tasks within the coalition workflow comprise virtual tasks associated with workflow views (see figures 1-2).

Claim 11-12: Schulz discloses a synchronizing task operable to preserve an order of execution of the virtual tasks (see page 95: section 4.1 and 4.2.1, disclosing a shared business process to maintain dependencies between elements of business processes from different organizations).

Claim 13: Schulz discloses wherein the collaborative workflow is implemented by communications between the first party and the second party regarding the first workflow view and the second workflow view (see page 96: section 4.3, disclosing business events that exchange information between private tasks and shared tasks).

Claim 14: Schulz discloses wherein the collaborative workflow is implemented by a third-party mediator (see page 95: section 4.2.1: ¶ 2; page 99: section 5.1).

Claims 16, 17, and 20-29: Claims 16, 17, and 20-29 are substantially similar to claims 1, 2, and 5-14 and are rejected under similar rationale.

Claim 31: Schulz discloses:

- a first workflow modeler operable to model a first workflow associated with only a first party (see figure 3, "Business Process Mapper" and "Service Modelling Tool"; section 5);
- a first view modeler operable to model a first virtual workflow as an abstracted first workflow different from and based on the first workflow (see figure 3, "Business Process Mapper" and "Service Modelling Tool"; section 5);
- a workflow engine operable to execute the first workflow and to virtually execute the first virtual workflow in conjunction with a second workflow associated with only a second party (see figure 3, "Workflow Engine"; section 5).

Schulz does not explicitly disclose expressing virtual tasks of the first workflow as first vertices within a first matrix. Basu discloses expressing tasks of workflows as vertices within a matrix (see tables on pages 23-24, 29, and 31). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the matrices of Basu to express the tasks of Schulz. One of ordinary skill in the art would have been motivated to do so for the benefit of efficiencies gained by being able to easily determine the relation between tasks.

Claim 33: Schulz discloses wherein the first virtual workflow comprises a first virtual task associated with a first task and a second task of the first workflow (see page 95: section 4.1, disclosing compound tasks that represent several tasks that are grouped together; figure 3), and further wherein the workflow engine is operable to associate a virtual execution state of the first virtual task with a first execution state of the first task and a second execution state of the second task (see page 95: section 4.1 and 4.2.1, disclosing a shared business process to maintain dependencies between elements of business processes from different organizations; figure 3)

Claim 34: Schulz discloses a monitor operable to track the virtual execution state, the first execution state, and the second execution state (see figure 3; page 99: section 5.2, disclosing tracking).

Claim 35: Schulz discloses a database for storing the workflows (see figure 3).

Claim 36: Schulz discloses a gateway for routing messages (see section 5.2).

Claim 37: Schulz discloses a mediator comprising:

- a security manager to receive messages regarding the first virtual workflow for decryption (see section 5.2);
- a database operable to store workflows (see figure 3 and section 5.2);
- a monitor operable to track execution states (see figure 3 and section 5.2).

Claims 38-44: Schulz does not explicitly disclose expressing workflow tasks as vertices within a workflow matrix. Basu discloses expressing tasks of workflows as vertices within a matrix (see tables on pages 23-24, 29, and 31). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the matrices of Basu to express the tasks of Schulz. One of ordinary skill in the art would have been motivated to do so for the benefit of efficiencies gained by being able to easily determine the relation between tasks.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Neil R. Kardos whose telephone number is (571) 270-3443. The examiner can normally be reached on Monday through Friday from 9 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Beth Boswell can be reached on (571) 272-6737. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Neil R. Kardos
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Primary Examiner, Art Unit 3623